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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,217	11/03/2003	Willem Roux	LSTC-002	3091
37804	7590	03/23/2007		
ROGER H. CHU 19499 ERIC DRIVE SARATOGA, CA 95070			EXAMINER PIERRE LOUIS, ANDRE	
			ART UNIT	PAPER NUMBER
			2123	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/700,217

Applicant(s)

ROUX, WILLEM

Examiner

Andre Pierre-Louis

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. The amendment filed on 01/04/2007 has been received and fully considered.
2. Claims 13-14 are added and now claims 1-14 are presented for examination.
3. Regarding the rejection under 35 USC 101, the Examiner maintains the rejection as the applicant fail to overcome the rejection (*see more clarification below*).
4. As per the rejection under 35 USC 102 (e) using Moler as a reference, the examiner withdraws the rejection.

Response to Arguments

5. Applicant's arguments filed 01/04/2007 have been fully considered but they are not persuasive.

5.1 Applicant argues that Venkataraman does not teaches selecting a set of outliers and does not the limitation of claims 2, 8, the examiner respectfully disagrees and asserts that Venkataraman teaches a Response Surface Methodology in which data points are selected for the evaluation of response function in the design (*see pg.136*) and that design points are chosen to maximize the predictive capability of the approximating function and minimize variance error and constructed the response surface approximations for prediction of the response of other design points of interest (*see 136-139, 170-173*); *also see fig.6.7-6.8 for a plot of Response surface prediction load and local bifurcation region of the finite element response*).

Venkataraman further teaches electing a set of design constrains using PANDA2 (*pg.47-48*).

- 5.2 While the applicant believed the independent along with their dependencies should be found allowable, the Examiner respectfully disagrees and asserts that the combined

references cited teach the entire claimed invention. Found the applicant's arguments non-persuasive, the rejection of the independent claims along with their dependencies is maintained.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

6.0 Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. While claiming a method, a computer program product, and a system for distinguishing effect due to design variable changes in a finite element analysis, including the steps of obtaining a response, constructing a model, and selecting a set of outliers,

the claims, as set forth, do not provide the end results of performing these steps to allow ones to access and use it.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.0 Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Venkataraman (*Modeling, Analyzing, and Optimization of Cylindrical Stiffened Panels for Reusable Launch Vehicle Structures*, 1999).

7.1 In considering the independent claims 1,7, and 13, Venkataraman teaches a method for distinguishing effect due to design variable changes used in a finite element analysis for designing a structural product, in particular the steps of: obtaining in a computing device a plurality of finite element analysis responses for a set of design experiments, wherein each of the set of design experiments has a specific combination of design variables values (*pg.62-67, 163-167*); constructing a metamodel from the plurality of finite element responses (*pg.4-5,29-33,128-139,154,170*); and selecting a set of outliers from the set of design experiments whose finite element analysis responses are not predicted by the metamodel (*pg.47-48,135-138*).

7.2 Regarding claims 2,8, and 14, Venkataraman teaches the steps of: identifying high likelihood bifurcation region by plotting an indicating quantity of the finite element responses of the set of outliers (*pg.128-130, 170-174*); and examining the finite element responses of maximum and minimum of the set of outliers (*pg.170-173, 137*).

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7.3 With regards to claims 3 and 9, Venkataraman teaches that the metamodel is constructed using least squares fitting techniques (*pg.4-5, 154-157*).

3.4 As per claims 4 and 10, Venkataraman teaches that the metamodel is based on nodal displacement (*pg.10-13, 21,36-45,125,179*).

7.5 With regards to claims 5 and 11, Venkataraman teaches that the metamodel is based on acceleration history (*pg.10-13, 21,36-45,125,179*).

7.6 Regarding claims 6 and 12, Venkataraman teaches that the indicating quantity is chosen from the group consisting of standard deviation and range (*pg.140-141*).

Conclusion

8. Claims 1-12 are rejected and **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Pierre-Louis whose telephone number is 571-272-8636. The examiner can normally be reached on Mon-Fri, 8:00AM-4:30PM.

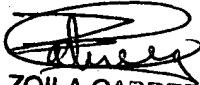
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul L. Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 18, 2007

APL


ZOILA CABRERA
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3/19/07